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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,241	12/13/2001	Kevin Lynn Fought	AUS920010863US1	6293

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Mr. Volel Emile
P.O. Box 202170
Austin, TX 78720-2170

EXAMINER

ELMORE, STEPHEN C

ART UNIT	PAPER NUMBER
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2186

DATE MAILED: 08/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/015,241

Applicant(s)

FOUGHT ET AL.

Examiner

Stephen Elmore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5 and 7-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,4,5,11,12,14,15,20-23,25,26,28,29,31 and 32 is/are allowed.
- 6) ☒ Claim(s) 7-10,13,16-19,24,27,30 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. This Office action is responsive to the amendment filed May 26, 2004, paper number 4, which canceled claims 3 and 6, amended claims 1, 4, 5, 7, 11-19, and added new claims 20-33.

2. Claims 1, 2, 4, 5 and 7-33 remain for examination.

Drawings

3. The objection to the drawings is **withdrawn**.

Specification

4. The objection to the specification is **withdrawn**.

Claim Rejections - 35 USC § 112

5. The rejections of claims 1-19 under 35 USC 112, second paragraph, are **withdrawn**.

6. The following new rejections are made.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 7-10, 13, 16-19 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are indefinite because:

a. claim 7, as to the newly amended language,

"determining whether the data is to be read from a storage system that is incompatibly formatted with the storage systems that the computer system ordinarily uses"

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this language is not clear in scope of meaning because it is not clear whether the determining step includes the scope of --

1) determining whether the data is to be read from a storage system which may (i.e., incidentally) be incompatible with the storage system that the computer system ordinarily uses or, whether,

2) the determining step also determines that the storage system is incompatible with the storage system that the computer system ordinarily uses; in the above language, the determining step can be taken to mean two different scopes, however, the existing language is insufficiently clear to permit one of ordinary skill in the art to determine which scope the language is meant to cover;

b. claims 7, 13, and 16 in the language,
claim 7, line 5, "a storage system that is incompatibly formatted with storage systems..."

and

claim 13, line 4, "the storage system being incompatibly formatted with storage systems..."

and

claim 16, line 3, "the storage system being incompatibly formatted with storage systems..."

the use of the terminology "incompatibly formatted with" in the above language makes this language unclear because this language suggests it is talking about a means of formatting, as opposed to the activity of comparing the kind of formatting of the two

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storage systems, therefore, the following suggested amended language would overcome this problem language,

"a storage system that is incompatibly formatted when compared to storage systems...";

c. claims 17-19 and 33, these claims recite the limitation "code data," however, "code data" is not a standard term in the computer art, nor has this terminology been defined in the specification or the claims, therefore, because this is not a term in the computer art and because this non-standard terminology has not been defined by Applicant, it's use in the claims makes it unclear what scope of meaning this terminology is meant to cover, however, for purposes of continued examination on the merits, the examiner will interpret this term to be equivalent to the closest relevant terminology to be found in the specification, which is the known prior art logical volume computer terminology term "logical volume device driver" (aka LVDD), see specification page 11, line 25 - page 12, line 11, because the disclosure teaches that it is well known in the art that a device driver is executable code (i.e., instructions) the system processor executes to enable application programs to communicate with storage devices to store and retrieve data from various storage devices in a computer system, where each type of storage device requires it's own device driver to permit processor communication with that storage device;

d. claims 8-10 inherit the deficiencies of the previous claim in the claim dependency chain.

Claim Rejections - 35 USC § 102

9. The rejections under 35 USC 102(e) are **withdrawn**.

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Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 7, 8, 13, 16, 19, 24, 27, 30 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over St. Pierre et al., US Patent 6,269,381 in view of Cox et al., US Patent 5,435,004 such combination teaching the claimed limitations as being old and well-known features in the use of Logical Volume Managers and data backup systems.

St. Pierre teaches the claimed apparatus, method, and computer system for reading data by a computer system, a computer program product on a computer readable medium for reading data from a storage system by a computer system, the storage system being incompatibly formatted with storage systems that are ordinarily used by the computer system, (claims 7, 13, 16, 19, 24, 27, 30 and 33), is taught as a system for backing up and restoring data in a computer storage system utilizing computer

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applications, array management software, a logical volume manager, application level files, mirror backup storage system, and actual physical storage on disk drives, where the formatting of the physical drives is incompatible with the storage system ordinarily used by the computer system is inherently taught because the formatting of drives is not compatible with the formatting of system RAM where the data is ordinarily used, see Abstract and Summary, and Figures 9 and 22, comprising:

Claims 7, 8, 13, 16, 19, 24, 27, 30, and 33,

a. the functions, determining whether the data is to be read and requesting the data is taught as the feature restoring data from the data backup, and as per claim 8, St. Pierre teaches that the requesting is performed by the first logical volume manager, this is taught, see Figure 9, element 14, however, St. Pierre does not explicitly teach the features,

Claims 7, 13, 16, 24, 27, and 30,

b. converting the data (including using a first logical volume manager) into a format compatible with a format of data stored in the storage systems that the computer system ordinarily uses, such as system RAM, and forwarding the data to be used;

or, does not explicitly teach the features,

Claims 19 and 33,

c. one storage device for storing code data, that is, "code data" is interpreted as Logical Volume Device Driver (LVDD) code, and one processor for processing the LVDD to request the data and convert the data into a format compatible with the format of data stored in the storage system ordinarily used by the computer system, such as system RAM, and to forward the data to be used;

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but Cox teaches these claimed features in a computerized backup system utilizing a logical volume of a disk volume management system, a logical volume manager, and reading and writing data to and from the backup system using Logical Volume Device Driver (LVDD) code which converts the format of the data into a format that is compatible with the storage system ordinarily used by the computer system, such as system RAM, and forwarding the data to be used which was requested, see Abstract and Summary, and see Figures 1 and 3, see col. 7, line 1 - col. 8, line 15, through a data reading and writing process incorporating the feature bad block relocation, where it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the layer of Logical Volume Device Driver code of Cox, see col. 7, lines 3-12, into the system of St. Pierre to convert the data requested and retrieved into the computer system of St. Pierre because, as suggested by Cox, at col. 7, lines 7-10, the teachings of Cox improve the availability of the system data by use of old and well-known Logical Device Driver code by the executing processor in Logical Volume Managers to format the data of such backup systems to enhance the availability of data.

Allowable Subject Matter

12. Claims 1, 2, 4, 5, 11, 12, 14, 15, 20-23, 25, 26, 28, 29, 31, and 32 are allowed over the prior art of record.

13. Claims 17 and 18 would be allowable over the prior art of record if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

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14. Claims 9 and 10 would be allowable over the prior art of record if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

15. Applicant's remarks are moot due to the newly presented rejections.

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following prior art patents teach that it is old and well-known in the art of Logical Volume Managers to incorporate Logical Volume Device Drivers as code executed by the system processor to store and retrieve data formatted for storage systems which are incompatible with the storage systems ordinarily used by the computer system

McBrearty et al., US 6,216,211

McBrearty et al., US 6,662,268

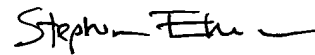
Baranovsky et al., US 5,897,661

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Elmore whose telephone number is (703) 308-6256. The examiner can normally be reached on Mon-Fri from 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on (703) 305-3821. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Stephen Elmore
Assistant Examiner
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August 5, 2004